

Other Measuring and Controlling Device Manufacturing: 2002

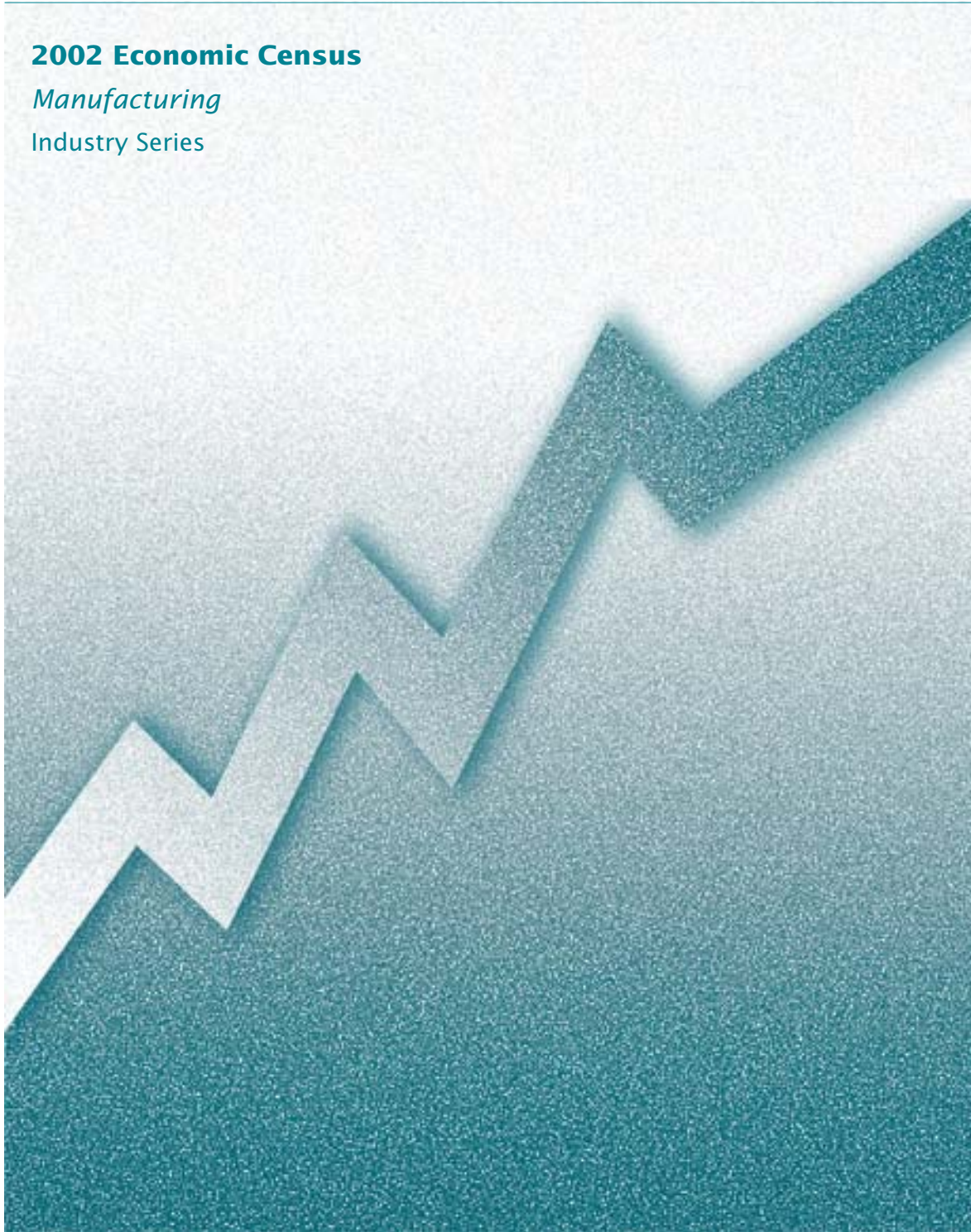
Issued December 2004

EC02-311-334519 (RV)

2002 Economic Census

Manufacturing

Industry Series



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Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



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-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)					
334519, Other measuring and controlling device manufacturing	2002...	783	825	30 934	1 548 610	14 494	27 709	501 607	3 313 496	2 186 756	5 557 095	'133 945
	2001...	N	N	35 953	1 697 901	18 010	34 276	569 728	3 997 955	2 668 373	6 617 283	121 907
	2000...	N	N	37 333	1 674 713	18 621	35 241	580 318	3 904 790	2 487 823	6 228 940	195 124
	1999...	N	N	34 840	1 468 209	17 649	32 392	521 951	3 230 276	2 136 055	5 376 365	158 323
	1998...	N	N	35 368	1 477 220	17 954	36 051	568 759	3 331 884	2 080 333	5 368 816	164 489
	1997...	826	852	33 616	1 345 708	17 900	34 855	519 231	3 132 661	1 957 921	5 082 777	135 266

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
334519, Other measuring and controlling device manufacturing												
United States	—	825	283	30 934	1 548 610	14 494	27 709	501 607	3 313 496	2 186 756	5 557 095	'133 945
Alabama	2	5	3	192	6 517	115	108	1 799	19 525	8 593	29 218	'752
California	—	135	49	4 786	261 610	1 750	3 336	58 113	591 019	326 909	918 534	'26 282
Connecticut	—	31	10	1 290	72 883	451	850	18 484	170 311	59 762	222 205	'2 962
Florida	1	35	9	1 125	33 906	684	1 170	12 673	79 558	53 699	135 251	'2 318
Georgia	3	6	2	101	5 306	41	81	1 124	12 850	9 147	22 067	'420
Illinois	1	30	10	1 022	47 227	435	880	15 339	112 716	81 956	195 687	'2 961
Indiana	—	19	4	774	44 571	502	572	12 054	107 237	83 300	194 258	'6 878
Massachusetts	1	59	22	2 708	155 663	1 026	2 032	40 950	267 363	156 322	431 242	'6 407
Michigan	1	47	11	997	50 782	504	968	18 148	91 786	42 504	127 791	'2 598
Minnesota	—	21	10	2 495	135 688	859	1 523	34 667	288 979	252 146	544 860	'8 314
Missouri	—	6	2	137	5 866	42	70	1 092	12 818	3 398	16 286	'236
New Hampshire	1	11	3	375	18 390	171	236	4 033	40 019	14 778	55 573	'2 527
New Jersey	1	15	5	337	17 248	167	306	5 699	24 406	22 072	47 217	'1 217
New York	—	40	22	2 116	102 193	1 044	2 059	39 228	228 317	123 402	352 108	'13 128
North Carolina	1	10	5	564	21 668	290	579	8 335	42 692	15 907	60 745	'1 538
Ohio	1	52	15	1 427	71 252	753	1 479	24 840	168 928	100 538	273 389	'7 127
Oklahoma	—	10	3	202	8 596	125	248	4 744	16 424	14 553	30 875	'668
Pennsylvania	—	46	21	1 606	69 282	802	1 472	25 974	153 179	76 656	224 085	'3 879
Tennessee	—	9	3	403	19 848	170	336	5 644	54 935	21 947	74 228	'1 215
Texas	—	66	21	2 387	110 687	1 756	4 255	73 969	217 823	263 269	520 848	'10 504
Virginia	2	11	3	161	10 330	46	86	2 395	15 526	8 514	24 156	'840
Washington	—	32	6	636	32 666	336	719	14 266	68 346	23 497	96 499	'1 570
Wisconsin	—	12	4	323	10 563	231	472	5 266	40 569	22 849	63 550	'3 118

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
334519, Other measuring and controlling device manufacturing	
Companies ¹	number.. 783
All establishments ²	number.. 825
Establishments with 1 to 19 employees	number.. 542
Establishments with 20 to 99 employees	number.. 207
Establishments with 100 employees or more	number.. 76
All employees ³	number.. 30 934
Total compensation	\$1,000.. 1 880 643
Annual payroll	\$1,000.. 1 548 610
Total fringe benefits	\$1,000.. 332 033
Production workers, average for year	number.. 14 494
Production workers on March 12	number.. 14 717
Production workers on May 12	number.. 14 615
Production workers on August 12	number.. 14 317
Production workers on November 12	number.. 14 267
Production worker hours	1,000.. 27 709
Production worker wages	\$1,000.. 501 607
Total cost of materials	\$1,000.. 2 186 756
Materials, parts, containers, packaging, etc., used	\$1,000.. 1 838 502
Resales	\$1,000.. 244 671
Purchased fuels	\$1,000.. 4 507
Purchased electricity	\$1,000.. 30 608
Contract work	\$1,000.. 68 468
Quantity of electricity purchased for heat and power	1,000 kWh.. 445 859
Quantity of electricity generated less sold for heat and power	1,000 kWh.. S
Total value of shipments	\$1,000.. 5 557 095
Primary products value of shipments	\$1,000.. 4 393 612
Secondary products value of shipments	\$1,000.. 540 471
Total miscellaneous receipts	\$1,000.. 623 012
Value of resales	\$1,000.. 427 441
Contract receipts	\$1,000.. 6 707
Other miscellaneous receipts	\$1,000.. 188 864
Primary products specialization ratio	percent.. 89
Value of primary products shipments made in all industries	\$1,000.. 5 009 699
Value of primary products shipments made in this industry	\$1,000.. 4 393 612
Value of primary products shipments made in other industries	\$1,000.. 616 087
Coverage ratio	percent.. 88
Value added	\$1,000.. 3 313 496
Total inventories, beginning of year	\$1,000.. 1 250 199
Finished goods inventories	\$1,000.. 421 337
Work-in-process inventories	\$1,000.. 298 694
Materials and supplies inventories	\$1,000.. 530 168
Total inventories, end of year	\$1,000.. 1 147 623
Finished goods inventories	\$1,000.. 372 973
Work-in-process inventories	\$1,000.. 290 215
Materials and supplies inventories	\$1,000.. 484 435
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. '1 830 397
Total capital expenditures (new and used)	\$1,000.. '133 945
Buildings and other structures (new and used)	\$1,000.. '22 966
Machinery and equipment (new and used)	\$1,000.. '110 979
Automobiles, trucks, etc., for highway use	\$1,000.. '5 220
Computers and peripheral data processing equipment	\$1,000.. '26 097
All other expenditures for machinery and equipment	\$1,000.. '79 662
Total retirements	\$1,000.. '108 876
Gross value of depreciable assets at end of year	\$1,000.. '1 855 466
Depreciation charges during year	\$1,000.. '139 409
Total rental payments	\$1,000.. 89 337
Buildings and other structures	\$1,000.. 67 620
Machinery and equipment	\$1,000.. 21 717
Total other expenses ⁴	\$1,000.. 500 520
Response coverage ratio ⁵	percent.. 73
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 16 559
Communications services ⁴	\$1,000.. 17 309
Legal services ⁴	\$1,000.. 16 589
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 7 811
Advertising and promotional services ⁴	\$1,000.. 26 449
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 12 633
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 3 435
Management consulting and administrative services ⁴	\$1,000.. 15 706
Taxes and license fees ⁴	\$1,000.. 12 848
All other expenses ⁴	\$1,000.. 371 182

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on 2002 Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
334519, Other measuring and controlling device manufacturing											
All establishments	—	825	30 934	1 548 610	14 494	27 709	501 607	3 313 496	2 186 756	5 557 095	'133 945
Establishments with—											
1 to 4 employees	8	298	619	26 958	353	607	10 317	57 171	33 448	91 319	'1 745
5 to 9 employees	6	106	703	36 025	326	628	12 140	77 149	49 015	125 280	'2 690
10 to 19 employees	2	138	1 856	83 589	1 010	1 782	34 960	173 900	89 188	263 027	'5 924
20 to 49 employees	1	134	4 267	200 145	2 179	4 289	73 581	438 232	243 161	677 820	'13 517
50 to 99 employees	—	73	5 212	246 098	2 445	4 621	76 595	476 671	311 222	791 624	'20 528
100 to 249 employees	—	55	8 078	404 157	3 846	8 070	134 011	920 808	494 817	1 417 222	'46 988
250 to 499 employees	—	15	5 173	261 358	2 574	5 222	98 485	557 724	373 769	974 390	'16 917
500 to 999 employees	—	5	h	D	D	D	D	D	D	D	D
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	319	1 031	48 704	534	990	17 062	92 477	62 121	152 737	'3 426

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
334519	Other measuring and controlling device manufacturing	825	30 934	1 548 610	14 494	27 709	501 607	3 313 496	2 186 756	5 557 095	'133 945
3345192	Aircraft engine instruments, except flight	25	4 538	250 563	2 459	3 993	87 235	593 248	352 328	961 801	'15 117
3345194	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	166	10 406	525 738	4 098	7 756	138 592	978 665	692 803	1 680 837	'38 025
3345195	Nuclear radiation detection and monitoring instruments	41	3 433	180 461	1 466	2 963	48 006	437 166	197 215	622 385	'16 082
3345197	Commercial, geophysical, meteorological, and general-purpose instruments and equipment, except medical thermometers	116	7 493	352 491	4 190	8 783	157 367	759 111	607 699	1 415 359	'42 030
3345199	Survey and drafting instruments and apparatus, including photogrammetric equipment	21	1 872	91 342	593	1 112	15 343	249 077	174 199	421 542	'12 144

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
334519	Other measuring and controlling device manufacturing	2002.. N	X	X	5 009 699
	1997.. N	N	X	X	5 004 377
3345192	Aircraft engine instruments, except flight	2002.. N	X	X	811 030
	1997.. N	N	X	X	N
33451921	Aircraft engine instruments, except flight	2002.. N	X	X	811 030
	1997.. N	N	X	X	N
3345192100	Aircraft engine instruments, except flight ¹	2002.. 43	X	X	811 030
	1997.. N	N	X	X	N
3345194	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	2002.. N	X	X	1 717 895
	1997.. N	N	X	X	N
33451941	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	2002.. N	X	X	1 717 895
	1997.. N	N	X	X	N
3345194100	Physical properties testing and inspection equipment and kinematic testing and measuring equipment ¹	2002.. 220	X	X	1 717 895
	1997.. N	N	X	X	N
3345195	Nuclear radiation detection and monitoring instruments	2002.. N	X	X	504 808
	1997.. N	N	X	X	502 142
33451951	Nuclear radiation detection and monitoring instruments	2002.. N	X	X	504 808
	1997.. N	N	X	X	502 142
3345195100	Nuclear radiation detection and monitoring instruments ¹	2002.. 43	X	X	504 808
	1997.. 42	N	X	X	502 142
3345197	Commercial, geophysical, meteorological, and general-purpose instruments and equipment, except medical thermometers	2002.. N	X	X	1 351 730
	1997.. N	N	X	X	1 543 851
33451971	Commercial, geophysical, meteorological, and general-purpose instruments and equipment, except medical thermometers	2002.. N	X	X	1 351 730
	1997.. N	N	X	X	1 543 851
3345197100	Commercial, geophysical, meteorological, and general-purpose instruments and equipment, except medical thermometers ¹	2002.. 143	X	X	1 351 730
	1997.. 187	N	X	X	1 543 851
3345199	Survey and drafting instruments and apparatus, including photogrammetric equipment	2002.. N	X	X	253 962
	1997.. N	N	X	X	344 853
33451991	Survey and drafting instruments and apparatus, including photogrammetric equipment	2002.. N	X	X	253 962
	1997.. N	N	X	X	344 853
3345199100	Survey and drafting instruments and apparatus, including photogrammetric equipment ¹	2002.. 22	X	X	253 962
	1997.. 27	N	X	X	344 853
334519W	Other measuring and controlling device manufacturing, nsk, total	2002.. N	X	X	370 274
	1997.. N	N	X	X	524 719
334519WY	Other measuring and controlling device manufacturing, nsk, total	2002.. N	X	X	370 274
	1997.. N	N	X	X	524 719
334519WYWW	Other measuring and controlling device manufacturing, nsk, for nonadministrative-record establishments	2002.. N	X	X	251 539
	1997.. N	N	X	X	415 462
334519WYWY	Other measuring and controlling device manufacturing, nsk, for administrative-record establishments	2002.. N	X	X	118 735
	1997.. N	N	X	X	109 257

¹For additional detail, see Current Industrial Report MA334B, Selected Instruments and Related Products.

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. Product Class Shipments for Selected States: 2002 and 1997

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3345192	Aircraft engine instruments, except flight	
	United States 2002 . .	811 030
	1997 . .	N
	California 2002 . .	99 028
	1997 . .	N
	Connecticut 2002 . .	36 477
	1997 . .	N
	New York 2002 . .	105 705
	1997 . .	N
	Pennsylvania 2002 . .	6 511
	1997 . .	N
	Texas 2002 . .	11 954
	1997 . .	N
3345194	Physical properties testing and inspection equipment and kinematic testing and measuring equipment	
	United States 2002 . .	1 717 895
	1997 . .	N
	California 2002 . .	163 326
	1997 . .	N
	Connecticut 2002 . .	72 113
	1997 . .	N
	Florida 2002 . .	19 435
	1997 . .	N
	Illinois 2002 . .	71 484
	1997 . .	N
	Indiana 2002 . .	7 903
	1997 . .	N
	Massachusetts 2002 . .	180 015
	1997 . .	N
	Michigan 2002 . .	62 491
	1997 . .	N
	New Hampshire 2002 . .	6 646
	1997 . .	N
	New Jersey 2002 . .	15 827
	1997 . .	N
	New York 2002 . .	108 761
	1997 . .	N
	Ohio 2002 . .	46 642
	1997 . .	N
	Pennsylvania 2002 . .	147 932
	1997 . .	N
	Tennessee 2002 . .	20 318
	1997 . .	N
	Texas 2002 . .	38 848
	1997 . .	N
	Virginia 2002 . .	5 411
	1997 . .	N
	Washington 2002 . .	74 360
	1997 . .	N
	Wisconsin 2002 . .	23 664
	1997 . .	N
3345195	Nuclear radiation detection and monitoring instruments	
	United States 2002 . .	504 808
	1997 . .	502 142
	California 2002 . .	50 080
	1997 . .	40 214
	New Jersey 2002 . .	5 803
	1997 . .	N
	New York 2002 . .	39 669
	1997 . .	21 736
	Ohio 2002 . .	131 200
	1997 . .	114 951
3345197	Commercial, geophysical, meteorological, and general-purpose instruments and equipment, except medical thermometers	
	United States 2002 . .	1 351 730
	1997 . .	1 543 851
	California 2002 . .	303 003
	1997 . .	426 766
	Florida 2002 . .	95 393
	1997 . .	71 148
	Massachusetts 2002 . .	67 094
	1997 . .	74 840
	Michigan 2002 . .	32 444
	1997 . .	39 026
	New Hampshire 2002 . .	10 184
	1997 . .	N
	New Jersey 2002 . .	7 509
	1997 . .	20 237
	New York 2002 . .	36 627
	1997 . .	89 545
	Ohio 2002 . .	35 327
	1997 . .	N
	Pennsylvania 2002 . .	41 563
	1997 . .	46 093
	Texas 2002 . .	302 764
	1997 . .	298 668
3345199	Survey and drafting instruments and apparatus, including photogrammetric equipment	
	United States 2002 . .	253 962
	1997 . .	344 853
	California 2002 . .	112 916
	1997 . .	133 414

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
334519	Other measuring and controlling device manufacturing		
00900001	Total materials .....2002..	X	1 838 502
	.....1997..	X	1 668 998
33441200	Printed circuit boards (without inserted components) for electronic circuitry .....2002..	X	21 430
	.....1997..	X	40 742
001900C4	Printed circuit assemblies, loaded boards, and modules (printed circuit boards with inserted electronic components) .....2002..	X	92 000
	.....1997..	X	74 707
33441300	Semiconductors (including transistors, diodes, rectifiers, and integrated circuits), for electronic circuitry .....2002..	X	34 802
	.....1997..	X	57 973
33441400	Capacitors for electronic circuitry .....2002..	X	7 213
	.....1997..	X	11 873
33441500	Resistors for electronic circuitry .....2002..	X	7 078
	.....1997..	X	9 651
001900D3	All other miscellaneous components and accessories, for electronic circuitry (excluding tubes) .....2002..	X	26 205
	.....1997..	X	43 470
33593101	Current-carrying wiring devices .....2002..	X	24 915
	.....1997..	X	24 561
001900B1	Electrical transmission, distribution, and control equipment .....2002..	X	8 326
	.....1997..	X	27 929
33410001	Electronic computing equipment .....2002..	X	D
	.....1997..	X	77 418
33451501	Electrical instrument mechanisms and meter movements (including instrument relays) .....2002..	X	19 294
	.....1997..	X	22 531
33451503	All other miscellaneous electrical measuring instruments and parts .....2002..	X	38 515
	.....1997..	X	27 242
32521105	Plastics resins consumed in the form of granules, pellets, powders, liquids, etc. ....2002..	X	3 416
	.....1997..	X	7 842
32610007	Fabricated plastics products (excluding gaskets, hoses, and belting) .....2002..	X	17 337
	.....1997..	X	35 399
332000A9	Sheet metal products (excluding stampings) .....2002..	X	20 728
	.....1997..	X	51 104
332000AC	Metal stampings .....2002..	X	3 960
	.....1997..	X	18 352
332000AE	Other fabricated metal products (excluding forgings, metal stampings, and sheet metal products) .....2002..	X	46 859
	.....1997..	X	108 323
33210000	Forgings .....2002..	X	2 257
	.....1997..	X	N
33100035	Castings, rough and semifinished .....2002..	X	D
	.....1997..	X	26 706
33100033	Metal shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	10 814
	.....1997..	X	55 806
33120001	Steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	24 433
	.....1997..	X	N
33100038	Aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	6 233
	.....1997..	X	N
33100076	Other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	2 471
	.....1997..	X	N
33142111	Copper and copper-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	734
	.....1997..	X	N
32720003	Glass and glass products (excluding windows and mirrors) .....2002..	X	3 808
	.....1997..	X	8 897
331000A7	Insulated wire and cable (including magnet wire) .....2002..	X	20 451
	.....1997..	X	N
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....2002..	X	26 049
	.....1997..	X	N
33331401	Optical instruments and lenses (excluding sighting, tracking, and fire control) .....2002..	X	3 862
	.....1997..	X	N
33422001	Electronic communication equipment .....2002..	X	7 533
	.....1997..	X	N
33531211	Fractional horsepower electric motors (less than 1 hp) .....2002..	X	6 526
	.....1997..	X	N
33441900	Liquid crystal display screens (LCD), including LED .....2002..	X	5 699
	.....1997..	X	N
32220017	Paper and paperboard containers (including shipping sacks and other paper packaging supplies) .....2002..	X	5 773
	.....1997..	X	N
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	552 726
	.....1997..	X	378 430
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	726 545
	.....1997..	X	560 042

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.